

REMARKS

The rejection of Claims 3-6, 9, and 11-14 under 35 U.S.C. §103(a) as unpatentable over U.S. 5,725,958 (Matsuda et al) in view of U.S. 3,442,686 (Jones) is respectfully traversed.

The objective of the present invention is to address a problem in the prior art, as described in the specification at page 1, line 8 through page 2, line 18, of short-lasting hydrophilicity imparted to hydrophobic synthetic resin materials, such as films, used, for example, for agricultural or horticultural uses. Applicants have been able to maintain the desired hydrophilicity for a relatively long period of time by the present invention. Applicants achieve this result by sputtering a thin film of a mixture of Si oxide and an oxide of at least one metal selected from the group consisting of Zr, Ti, Ta, Nb, Sn, and Zn onto a hydrophobic synthetic resin substrate which is a tetrafluoroethylene type resin.

Matsuda et al is concerned with inadequate gas barrier properties in films used for wrapping food, medicine and electronic components, and is thus concerned with a problem different from Applicants. Matsuda et al disclose a gas barrier film including a plastic film and a thin film which is made of a composition containing an oxide as a main component and is formed on at least one surface of the plastic film. Matsuda et al does not impose a limitation on the metal, non-metal or semiconductor used to form the oxide (column 3, lines 38-40), and lists ten particular oxides (column 3, lines 40-43), and a number of mixtures of two or more of these oxides. No mixtures of oxides are disclosed that correspond to the mixture of particular oxides recited in the present claims, let alone such a mixture where the Si content is from 50 to 80 atomic % of the total metals. Nor do Matsuda et al disclose a fluorine-containing resin as the material of their plastic film, let alone that it be hydrophobic. Indeed, of all of the exemplified polymers disclosed, none contains fluorine (column 3, lines 19-25). Note also Matsuda et al's disclosure that when their thin film comprises a

composition containing silicon oxide as a main component, the composition can contain 10% or less of other components unless the characteristics of the thin film are spoiled (column 3, lines 53-62).

The Examiner relies on Jones for his disclosure of fluorine-containing resins and other resins as an organic base film in a low permeability transparent packaging film containing a transparent gas and liquid barrier, glassy coating of an inorganic material such as a silicon oxide.

Even if one skilled in the art combined Matsuda et al and Jones, the result would still not be the presently-claimed invention. As discussed above, when silicon oxide is the main component in Matsuda et al, the thin film composition contains no more than 10% of other components. Moreover, of the metals recited in present Claim 11, only Zr, Ti, and Zn are listed in Matsuda et al, but no combinations of an Si oxide and an oxide of Zr, Ti, and/or Zn are exemplified therein. Claims 4 and 6 are separately patentable, since the applied prior art neither discloses nor suggests the presence of Sn. Claim 9 is separately patentable because the applied prior art neither discloses nor suggests a covering material for an agricultural or horticultural house. Claims 13, 14, 17 and 18 are also separately patentable because Jones neither discloses nor suggests a tetrafluoroethylene/ethylene copolymer.

Much of the content of the rejection is irrelevant, since the Examiner has clearly repeated findings made in previous Office Actions in the grandparent of this application, with regard to claims no longer present.

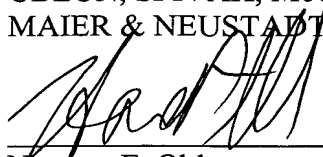
For all the above reasons, it is respectfully requested that the rejection over Matsuda et al in view of Jones be withdrawn.

Application No. 10/612,956  
Reply to Office Action of February 17, 2004

All of the presently pending claims in this application are now believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Respectfully submitted,

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